## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/674,228 Confirmation No.: 1891

Applicant. : HANASH et al.

Filed: September 29, 2003

TC/A.U. : 1642

Examiner : Misook Yu

Docket No. : 108140.00015

Customer No. : 38485

For : METHOD FOR IDENTIFICATION OF CELLULAR PROTEIN

ANTIGENS AND PRESENCE OF ANTIBODIES TO SPECIFIC

CELLULAR PROTEIN ANTIGENS IN SERUM

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## **RESPONSE**

Sir:

This paper is submitted in response to the Office action dated March 2, 2006.

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 4 of this paper.

Appln. No. 10/674,228

Reply to Office action of March 2, 2006

Response dated April 28, 2006

**AMENDMENTS TO THE CLAIMS:** 

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:** 

Claim 1 (Currently Amended) A method for identifying proteins, to which a subject with

cancer produces autoantibodies, said method comprising consisting essentially of: (a) extracting

proteins from a sample of cells; (b) separating the extracted proteins by two-dimensional

electrophoresis; (c) transferring the proteins separated by two-dimensional electrophoresis to a

membrane; (d) incubating the membrane with serum from a subject known to have the cancer;

(e) detecting the proteins to which autoantibodies in the patients serum have bound; and (f)

comparing the proteins to which antibodies in the subject's serum sample bind to proteins to

which antibodies in control serum sample bind, wherein those proteins bound by antibodies in

the subject's serum but not the control serum are identified as proteins to which a subject with

cancer produces autoantibodies.

Claim 2 (original)

The method of claim 1 wherein the sample of cells is derived from the

subject's tumor.

Claim 3 (original) The method of claim 1 wherein the sample of cells is derived from a

continuous cell line representative of the subject's tumor.

Claim 4 (original) The method of claim 1 wherein the step of detecting the proteins to

which autoantibodies in the subject's serum sample have bound comprises the use of a signal-

generating component bound to an antibody that is specific for antibodies in the subject's sample.

Claims 5-21 (Canceled)

## REMARKS

This paper is filed in response to the Office Action dated March 2, 2006.

By this amendment, Applicants confirm the election of Claims 1-4 on the merits and hereby cancel Claims 5-21 without prejudice. Applicants expressly reserve the right to file the subject matter of canceled Claims 5-21 in one or more divisional applications.

Claims 1-4 remain rejected under 35 U.S.C. §102(b) as anticipated by Hirsch et al. The Examiner contends that the use of "comprising" in the claims does not exclude any unrecited steps or elements, in particular, the one-dimensional gel electrophoresis method of Hirsch et al. to first identify proteins in Hodgkins disease that are then subject to further characterization by a 2D electrophoresis step.

Applicants have amended Claim 1 to replace the transitional "comprising" with "consisting essentially of," which excludes the one-dimensional gel electrophoresis step of Hirsch et al. from the claimed method.

In view of the amendment to Claim 1 and the remarks herein, Applicants believe the present application is in condition for allowance of Claims 1-4.

Applicants believe that no additional fees are required in connection with this response.

However, if additional fees are required, the Commissioner is hereby authorized to charge any

additional payment, or credit any overpayment, to Deposit Account No. 01-2300,

referencing Docket Number 108140.00015.

Respectfully submitted,

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## **FEE CALCULATION**

Any additional fee required has been calculated as follows:

X If checked, "Small Entity" status is claimed.

| ( <del></del>  | (Column 1)                                | (Column 2)                            | (Column 3)       | SMA    | SMALL ENTITY |              |           | LARGE ENTITY |              |  |
|--|---|---------------------------------------|------------------|--------|--------------|--------------|-----------|--------------|--------------|--|
| Company of the state of the sta | CLAIMS<br>REMAINING<br>AFTER<br>AMENDMENT | HIGHEST NO:<br>PREVIOUSLY<br>PAID FOR | PRESENT<br>EXTRA | RAT    | E            | ADD'L<br>FEE | <u>or</u> | RATE         | ADD'L<br>FEE |  |
| TOTAL CLAIMS   | 4 MINUS                                   | 21                                    | = 0              | x \$25 |              | \$0.00       |           | x \$50       | S            |  |
| INDEP CLAIMS   | 1 MINUS                                   | 3                                     | = 0              | x \$1( | ю            | \$0.00       |           | x \$200      | \$           |  |
| ☐ FIRST PRESENTATION OF MULTIPLE DEP. CLAIM +\$180   |   |                                       |                  |        | 30           | \$0.00       | <u>OR</u> | + \$360      | \$           |  |
|  |   |                                       |                  |        |              | \$0.00       |           |              | S            |  |
|  |   |                                       |                  |        | L            |              | l         |              |              |  |

The U.S. Patent and Trademark Office is hereby authorized to charge and deficiency or credit any overpayment of fees associated with this communication to Deposit Account No. <u>01-2300</u> referencing docket number <u>108140.00015</u>.